

What is claimed is:

- 1 1. A pressure chamber of a piezoelectric ink jet
2 print head, comprising:
3 a substrate;
4 a concave chamber formed on the substrate, having an
5 opening of a relatively large sectional area and
6 a bottom of a relatively small sectional area;
7 a vibrating plate formed above the concave chamber; and
8 a piezoelectric unit on the vibrating plate.
- 1 2. The pressure chamber as claimed in claim 1,
2 wherein the substrate is a silicon substrate.
- 1 3. The pressure chamber as claimed in claim 2,
2 wherein the substrate is a silicon wafer with a crystal
3 structure of [100] or [110].
- 1 4. The pressure chamber as claimed in claim 2,
2 wherein the concave chamber is formed by wet etching.
- 1 5. The pressure chamber as claimed in claim 1,
2 wherein the cross-section of the concave chamber is
3 rectangular.
- 1 6. The pressure chamber as claimed in claim 1,
2 wherein the vibrating plate is a silicon wafer, a metal
3 plate or a ceramic plate.
- 1 7. The pressure chamber as claimed in claim 1,
2 wherein the vibrating plate is formed above the concave
3 chamber by wafer-bonding.

1 8. The pressure chamber as claimed in claim 1,
2 wherein the piezoelectric unit comprises lead zirconate
3 titanate (PZT).

1 9. A fabrication method for a pressure chamber of a
2 piezoelectric ink jet print head, comprising steps of:

3 providing a substrate;

4 forming a concave chamber on the substrate to serve as
5 the pressure chamber, wherein the concave chamber
6 has an opening of a relatively large sectional
7 area and a bottom of a relatively small sectional
8 area;

9 forming a vibrating plate above the concave chamber;

10 and

11 forming a piezoelectric unit on the vibrating plate.

1 10. The fabrication method for a pressure chamber as
2 claimed in claim 9, wherein the substrate is a silicon
3 substrate.

1 11. The fabrication method for a pressure chamber as
2 claimed in claim 10, wherein the substrate is a silicon
3 wafer with a crystal structure of [100] or [110].

1 12. The fabrication method for a pressure chamber as
2 claimed in claim 10, wherein the concave chamber is formed
3 by wet etching.

1 13. The fabrication method for a pressure chamber as
2 claimed in claim 9, wherein the cross-section of the concave
3 chamber is rectangular.

1 14. The fabrication method for a pressure chamber as
2 claimed in claim 9, wherein the vibrating plate is a silicon
3 wafer, a metal plate or a ceramic plate.

1 15. The fabrication method for a pressure chamber as
2 claimed in claim 9, wherein the vibrating plate is formed
3 above the concave chamber by wafer-bonding.

1 16. The fabrication method for a pressure chamber as
2 claimed in claim 9, wherein the piezoelectric unit comprises
3 lead zirconate titanate (PZT).